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CLAIMS

What is claimed is:

- 1. A method for synchronizing the sampling rate of digital cells in an integrated services hub, comprising:
- (a) extracting from the network connection a reference sampling rate representing the rate of sampling occurring at the end of the network connection opposite from the end connected to the integrated services hub; and
 - (b) adjusting the sampling rate in the integrated services hub to about equal the reference sampling rate.
 - 2. The method of claim 1 wherein the reference sampling rate is an embedded signal.
 - 3. The method of claim 1 wherein the reference sampling rate is extrapolated from the arrival rate of incoming cells to the integrated services hub.
 - 4. The method of claim 3 further comprising:

 monitoring the fill level of incoming cells received into an incoming cell buffer;

 increasing the sampling rate in the integrated service hub in response to an increase in the
 fill level of the incoming cell buffer above the midpoint; and
- decreasing the sampling rate in the integrated services hub in response to a decrease in the fill level of the incoming cell buffer below the midpoint.

- 5. The method of claim 4 further comprising using a voltage controlled oscillator to increase and decrease the sampling rate in the integrated services hub.
- 6. The method of claim 4 further comprising using a programmable frequency divider to increase and decrease the sampling rate in the integrated services hub.
 - 7. The method of claim 6 wherein the programmable frequency divider is a baud rate generator.

- A method for synchronizing the sampling rate of digital cells in an integrated services hub, comprising:
- (a) transmitting outgoing digital cells and receiving incoming digital cells to and from the integrated services hub across a network connection;
- (b) coding the outgoing cells prior to their transmission from the integrated services hub;
 - (c) decoding the incoming cells following their receipt by the integrated services hub; and
 - (d) adjusting the rate of coding and decoding in the integrated services hub to about equal the arrival rate of cells to the integrated services hub.
 - 9. The method of claim 8 wherein the step of adjusting the sampling rate further comprises:

 monitoring the fill level of incoming cells received into an incoming cell buffer;

 increasing the sampling rate in the integrated service hub in response to an increase in the

decreasing the sampling rate in the integrated services hub in response to a decrease in the fill level of the incoming cell buffer below the midpoint.

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M. An apparatus for synchronizing the sampling rate of digital cells in an integrated services hub, comprising:

a sampling rate adjuster receiving a baseline clock signal and a reference sampling rate, the sampling rate adjuster adjusting the baseline clock signal to about equal the reference sampling rate and outputting a sampling rate signal equal to the adjusted baseline clock signal;

- a central processing unit (CPU) communicating with and controlling the sampling rate adjuster;
- a CODEC in communication with and receiving the sampling rate signal from the sampling rate adjuster; and
- a feedback loop communicating the sampling rate signal from the sampling rate adjuster to the CPU.
- 11. The apparatus of claim 10 wherein the sampling rate adjuster is a voltage controlled oscillator.
- 12. The apparatus of claim 10 wherein the sampling rate adjuster is a programmable frequency divider.
- 13. The apparatus of claim 12 wherein the programmable frequency divider is a baud rate generator.
- 14. The apparatus of claim 10 wherein the reference sampling rate is the baseline clock signal.

- 15. The apparatus of claim 10 wherein the baseline clock signal is produced by a local clock.
- 16. The apparatus of claim 10 wherein the reference sampling rate is extracted from the network connection.
- 17. The apparatus of claim 16 wherein the reference sampling rate is an embedded signal.
- 18. The apparatus of claim 16 wherein the reference sampling rate is extrapolated from the arrival rate of incoming cells to the integrated services hub.
- 19. The apparatus of claim 16 wherein the CPU calculates the reference sampling rate by monitoring the fill level of incoming cells received into an incoming cell buffer.